



#7/12  
02-13-03  
PATENTS

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicants:** Douglas James Hilton, et al.

**Examiner:** Unassigned

**Serial No:** 10/014,156

**Art Unit:** 1646

**Filed:** December 7, 2001

**Docket:** 11268A

**For:** NOVEL HAEMOPOIETIN RECEPTOR  
AND GENETIC SEQUENCES ENCODING SAME

**Dated:** February 5, 2003

Assistant Commissioner for Patents  
United States Patent and Trademark Office  
Washington, D.C. 20231

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FEB 13 2003

TECH CENTER 1800/2900

**INFORMATION DISCLOSURE STATEMENT**

Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, it is requested that the following references, which are also listed on the attached Form PTO-1449, be made of record in the above-identified case.

1. X. X. Du, et al. (1994), "Interleuken-11: A Multifunctional Growth Factor Derived From the Hematopoietic Microenvironment", Blood, **83**: pp. 2023-2030;
2. Y.C. Yang, et al. (1992), "Interleukin-11 and Its Receptor", Biofactors, **4**: pp. 15-21;
3. S.R. Paul, et al. (1990), "Molecular Cloning of a cDNA Encoding Interleukin 11, a Stromal Cell-Derived Lymphopoietic and Hematopoietic Cytokine", Proc. Natl. Acad. Sci. USA, **87**: pp. 7512-7516;

**CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner of Patents and Trademarks, Washington, D.C. 20231 on February 5, 2003.

Dated: February 5, 2003

  
Michelle Mustafa

4. M. Musashi, et al. (1991), "Synergistic Interactions Between Interleukin-11 and Interleukin-4 in Support of Proliferation of Primitive Hematopoietic Progenitors of Mice", Blood, **78**: pp. 1448-1451;
5. K.R. Schibler, et al. (1992), "Effect of Interleukin-11 on Cycling Status and Clonogenic Maturation of Fetal and Adult Hematopoietic Progenitors", Blood, **4**: pp. 900-903;
6. K. Tsuji, et al. (1992), "Enhancement of Murine Hematopoiesis by Synergistic Interactions Between Steel Factor (ligand for *c-kit*), Interleukin-11, and Other Early Acting Factors in Culture", Blood, **79**: pp.2855-2860;
7. Samuel A. Burstein, et al. (1992), "Leukemia Inhibitory Factor and Interleukin-11 Promote Maturation of Murine and Human Megakaryocytes in Vitro", J. Cell. Physiol, **153**: pp. 305-312;
8. Giao Hangoc, et al. (1993), "In Vivo Effects of Recombinant Interleukin-11 on Myelopoiesis in Mice", Blood, **81**: pp. 965-972;
9. Masanao Teramura, et al. (1992), "Interleukin-11 Enhances Human Megakaryocytopoiesis in Vitro", Blood, **79**: pp. 327-331;
10. Yuji Yonomura, et al., (1992), "Synergistic Effects of Interleukin 3 and Interleukin-11 on Murine Megakaryopoiesis in Serum-free Culture", Exp. Hematol, **20**: pp. 1011-1016;
11. Heinz Baumann, et al., (1991), "Interleukin-11 Regulates the Hepatic Expression of the Same Plasma Protein Genes as Interleukin-6", J. Biol. Chem., **266**: pp. 20424-20427;
12. Ichiro Kawashima, et al. (1991), "Molecular Cloning of cDNA Encoding Adipogenesis Inhibitory Factor and Identity with Interleukin-11", Febs. Lett., **283**: pp. 199-202;
13. D.C. Keller, et al. (1993), "Interleukin-11 Inhibits Adipogenesis and Stimulates Myelopoiesis in Human Long-Term Marrow Cultures", Blood, **82**: pp. 1428-1435 ;
14. J. Sambrook, et al., (1989), "Molecular Cloning", A Laboratory Manual Cold Spring Harbor Laboratory, Cold Spring Harbor, NY;
15. Douglas J. Hilton, et al. (1994), "Cloning of a Murine IL-11 Receptor  $\alpha$ -chain; Requirement for gp130 for High Affinity Binding and Signal Transduction", EMBO Journal, **13**: pp. 4765-4777;
16. Da-Wei Gong, et al. (1996), "Genomic Structure and Promoter Analysis of the Human obese Gene", J. Biol. Chem., **271**: pp. 3971-3974;
17. Seiichi Mizushima, et al. (1990), "pEF-BOS, a Powerful Mammalian Expression Vector", Nucleic Acids Research, **18**: pp. 5322;
18. Nicos A. Nicola (1996), "Molecular Cloning of Two Novel Transmembrane Ligands for Eph-Related Kinases (LERKS) that are Related to LERK-2", Growth Factors, **13**: pp. 141-149;
19. Douglas J. Hilton, et al. (1992), "Kinetic Analyses of the Binding of Leukemia Inhibitory Factor to Receptors on Cells and Membranes and in Detergent Solution", J. Biol. Chem., **267**: 10238-10247;
20. George Scatchard (1949), "The Attractions of Proteins for Small Molecules and Ions", Ann. N.Y. Acad. Sciences, **51**: 660-672;

21. Unit 3.3.1 (1995), "Mapping by Partial Endonuclease Digestions", Current Protocols in Molecular Biology; and
22. Marvin B. Shapiro, et al. (1987), "RNA Splice Junctions of Different Classes of Eukaryotes: Sequence Statistics and Functional Implications in Gene Expression", Nucleic Acids Research, **15**: 7155-7174;

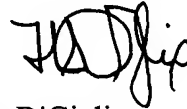
Applicants are submitting copies of the above-cited references.

Please note that United States Patent No. 5,763,211, dated June 9, 1998, issued to Snodgrass, et al., was cited in applicants' prior application, Serial No. 09/043,816 by the Examiner in an Office Action dated August 7, 2000. Since this reference was previously cited by the Examiner in said parent case, applicants are not submitting a copy of this reference, but respectfully request that this reference be made of record in the instant application.

Consideration of this Information Disclosure Statement is respectfully requested, since the art provided may be material to the examination of the present application as defined under 37 C.F.R. §1.56.

Inasmuch as this Information Disclosure Statement is being submitted in accordance with the schedule set out in 37 C.F.R. § 1.97(b), no statement or fee is required.

Respectfully submitted,



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FSD:ahs

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.  
11268A

In Re Application Of: **Douglas James Hilton, et al.**

FEB 10 2003

Serial No.  
10/014,156

Filing Date  
Dec. 7, 2001

Examiner  
Unassigned

Group Art Unit  
1646

Title: **NOVEL HAEMOPOIETIN RECEPTOR AND GENETIC SEQUENCES**  
**ENCODING SAME**

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Washington, D.C. 20231

**37 CFR 1.97(b)**

1. ☒ The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application; within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; or before the mailing date of a first Office Action on the merits, whichever event occurs last.

**37 CFR 1.97(c)**

2. ☐ The Information Disclosure Statement submitted herewith is being filed after three months of the filing of a national application, or the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; or after the mailing date of a first Office Action on the merits, whichever occurred last but before the mailing date of either:

1. a Final Action under 37 CFR 1.113, or
  2. a Notice of Allowance under 37 CFR 1.311,
- whichever occurs first.

Also submitted herewith is:

- ☐ a certification as specified in 37 CFR 1.97(e);

**OR**

- ☐ the fee set forth in 37 CFR 1.17(p) for submission of an Information Disclosure Statement under 37 CFR 1.97(c).

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.  
11268A

In Re Application Of: **Douglas James Hilton, et al.**

Serial No.  
10/014,156

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Dec. 7, 2001

Examiner  
Unassigned

Group Art Unit  
1646

Title: **NOVEL HAEMOPOIETIN RECEPTOR AND GENETIC SEQUENCES  
ENCODING SAME**

**Payment of Fee**

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

- ☐ A check in the amount of \_\_\_\_\_ is attached.
- ☒ The Assistant Commissioner is hereby authorized to charge and credit Deposit Account No. **19-1013/SSMP** as described below. A duplicate copy of this sheet is enclosed.
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I certify that this document and fee is being deposited on **Feb. 5, 2003** with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

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**Michelle Mustafa**  
Typed or Printed Name of Person Mailing Correspondence

Dated: **February 5, 2003**

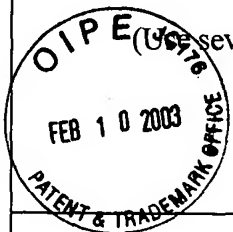
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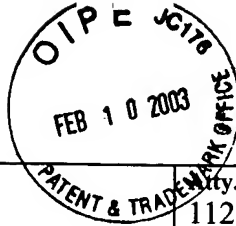
**Frank S. DiGiglio, Reg. No. 31,346  
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Form PTO-1449 (REV. 7-80) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE				Atty. Docket No. 11268A		Serial No. 10/014,156	
<b>LIST OF PRIOR ART CITED BY APPLICANT</b>				Applicants Douglas James Hilton, et al.		Group 1646	
(Use several sheets if necessary)							
<b>U.S. PATENT DOCUMENTS</b>				Filing Date Dec. 7, 2001		TECH CENTER 1600/290	
Examiner Initial		DOCUMENT NUMBER	DATE				
<b>FOREIGN PATENT DOCUMENTS</b>							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES NO
<b>OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
	1	X. X. Du, et al. (1994), "Interleuken-11: A Multifunctional Growth Factor Derived From the Hematopoietic Microenvironment", <u>Blood</u> , <b>83</b> : pp. 2023-2030					
	2	Y.C. Yang, et al. (1992), "Interleukin-11 and Its Receptor", <u>Biofactors</u> , <b>4</b> : pp. 15-21					
	3	S.R. Paul, et al. (1990), "Molecular Cloning of a cDNA Encoding Interleukin 11, a Stromal Cell-Derived Lymphopoietic and Hematopoietic Cytokine", <u>Proc. Natl. Acad. Sci. USA</u> , <b>87</b> : pp. 7512-7516					
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	5	K.R. Schibler, et al. (1992), "Effect of Interleukin-11 on Cycling Status and Clonogenic Maturation of Fetal and Adult Hematopoietic Progenitors", <u>Blood</u> , <b>4</b> : pp. 900-903					
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	7	Samuel A. Burstein, et al. (1992), "Leukemia Inhibitory Factor and Interleukin-11 Promote Maturation of Murine and Human Megakaryocytes in Vitro", <u>J. Cell. Physiol</u> , <b>153</b> : pp. 305-312					
	8	Giao Hangoc, et al. (1993), "In Vivo Effects of Recombinant Interleukin-11 on Myelopoiesis in Mice", <u>Blood</u> , <b>81</b> : pp. 965-972					
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	10	Yuji Yonomura, et al., (1992), "Synergistic Effects of Interleukin 3 and Interleukin-11 on Murine Megakaryopoiesis in Serum-free Culture", <u>Exp. Hematol</u> , <b>20</b> : pp. 1011-1016					
	11	Heinz Baumann, et al., (1991), "Interleukin-11 Regulates the Hepatic Expression of the Same Plasma Protein Genes as Interleukin-6", <u>J. Biol. Chem.</u> , <b>266</b> : pp. 20424-20427					
EXAMINER				DATE CONSIDERED			



Form PTO-1449  
(REV. 7-80)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEApplicant's Docket No.  
11268ASerial No.  
10/014,156**LIST OF PRIOR ART  
CITED BY APPLICANT**

(Use several sheets if necessary)

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Applicants  
Douglas James Hilton, et al.Filing Date  
Dec. 7, 2001Group  
1646

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**U.S. PATENT DOCUMENTS**

Examiner Initial	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (if appropriate)

**FOREIGN PATENT DOCUMENTS**

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION

**OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

12	Ichiro Kawashima, et al. (1991), "Molecular Cloning of cDNA Encoding Adipogenesis Inhibitory Factor and Identity with Interleukin-11", <u>Febs. Lett.</u> , <b>283</b> : pp. 199-202
13	D.C. Keller, et al. (1993), "Interleukin-11 Inhibits Adipogenesis and Stimulates Myelopoiesis in Human Long-Term Marrow Cultures", <u>Blood</u> , <b>82</b> : pp. 1428-1435
14	J. Sambrook, et al., (1989), "Molecular Cloning", <u>A Laboratory Manual Cold Spring Harbor Laboratory</u> , Cold Spring Harbor, NY
15	Douglas J. Hilton, et al. (1994), "Cloning of a Murine IL-11 Receptor $\alpha$ -chain; Requirement for gp130 for High Affinity Binding and Signal Transduction", <u>EMBO Journal</u> , <b>13</b> : pp. 4765-4777
16	Da-Wei Gong, et al. (1996), "Genomic Structure and Promoter Analysis of the Human obese Gene", <u>J. Boil. Chem.</u> , <b>271</b> : pp. 3971-3974
17	Seiichi Mizushima, et al. (1990), "pEF-BOS, a Powerful Mammalian Expression Vector", <u>Nucleic Acids Research</u> , <b>18</b> : pp. 5322
18	Nicos A. Nicola (1996), "Molecular Cloning of Two Novel Transmembrane Ligands for Eph-Related Kinases (LERKS) that are Related to LERK-2", <u>Growth Factors</u> , <b>13</b> : pp. 141-149
19	Douglas J. Hilton, et al. (1992), "Kinetic Analyses of the Binding of Leukemia Inhibitory Factor to Receptors on Cells and Membranes and in Detergent Solution", <u>J. Biol. Chem.</u> , <b>267</b> : 10238-10247
20	George Scatchard (1949), "The Attractions of Proteins for Small Molecules and Ions", <u>Ann. N.Y. Acad. Sciences</u> , <b>51</b> : 660-672
21	Unit 3.3.1 (1995), "Mapping by Partial Endonuclease Digestions", <u>Current Protocols in Molecular Biology</u>
22	Marvin B. Shapiro, et al. (1987), "RNA Splice Junctions of Different Classes of Eukaryotes: Sequence Statistics and Functional Implications in Gene Expression", <u>Nucleic Acids Research</u> , <b>15</b> : 7155-7174

EXAMINER

DATE CONSIDERED

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.